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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/813,613 | 03/30/2004 | Shinpei Nagatani | 1324.70221 | 4370 |

7590 01/06/2009
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| EXAMINER |
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MA, CALVIN

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| ART UNIT | PAPER NUMBER |
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2629

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| MAIL DATE | DELIVERY MODE |
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01/06/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 10/813,613 | Applicant(s) NAGATANI ET AL. | |
| | Examiner CALVIN C. MA | Art Unit 2629 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 October 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The proposed reply filed on 10/22/2008 has been entered and considered, the new prior Paolini et al. (US Patent 6,768,525) is introduced to address the new claimed limitations.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-3 and 27 are rejected under 35 U.S.C. 102(e) as being anticipated by Paolini et al. (US Patent 6,768,525).

As to claims 1 and 27, Paolini discloses an illumination device (i.e. the LED powered LCD backlighting system) (see Fig. 3) comprises:

a plurality of optical waveguide (i.e. 42,41 and 40) each including a plurality of separate light diffusion reflection layers thereon (i.e. the waveguide is able to diffuse and reflect the light so that it can be used for the frontal lighting of the LCD display) (see Fig. 3, Col. 4, Lines 1-62) for diffusing and reflecting guided light, a light emission surface for emitting the diffused light (i.e. 45, 44, 43 LED surfaces that can have diffuser

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66) (see Fig. 7, Col. 5, Lines 48-65), and a plurality of light-emitting areas each corresponding to a location in which one of the light diffusion reflecting layers is formed and which light emitting areas are separated from each other, the plurality of optical waveguides being stacked so that the plurality of light-emitting areas are disposed almost complementarily and adjacent each other when viewed in a direction perpendicular to the light emission surface (i.e. the waveguide 42, 41, and 40 are stacked and adjacent to each other where each has areas 46 that help illuminate the front of the display unit) (see Fig. 3, Col. 4, Lines 1-62); and

a plurality of light sources respectively disposed at ends of the plurality of optical waveguides (i.e. the LED 45, 44, and 43 are situated at the end of each of the waveguide 42, 41, 40) (see Fig. 3).

As to claim 2, Paolini teaches wherein the light diffusion reflection layers are disposed not to overlap with each other between the plurality of optical waveguide when view in the direction perpendicular to the light emission surface (i.e. since the diffuser 66 is inside the LED element and also has some reflective effect it is does not overlap each other in one embodiment the R, G, B, light unit does not overlap as they are optical fibers spread apart from each other) (see Fig. 7, Col. 5, Lines 48-65).

As to claim 3, Paolini teaches wherein the light diffusion reflection layers are disposed to partially overlap with each other between the plurality of optical waveguide when view in the direction perpendicular to the light emission surface (i.e. since the

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entire optical wave guide are situated so that they are at least partially overlapped when considered as a whole unit) (see Fig. 3, Col. 4, Lines 1-62).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Paolini in view of Beeteson (US Patent 5,796,382).

As to claim 4, Paolini does not teaches further comprising light source control system for sequentially intermittently turning on the plurality of light sources one at a time. Beeteson teaches light source control system for sequentially intermittently turning on the plurality of light sources one at a time (i.e. each of the light source unit can be turned on intermittently to save power) (see Fig. 2, Col. 2, Lines 37-65).

Therefore it would have been obvious for one of ordinary skill in the art at the time the invention was made to have used the intermittently light source design where the source is turned on one at a time of Beeteson in the overall stacked RGB LCD lighting system of Paolini in order to save power for the overall display system in situations where only one color would be displayed and portability requires a battery

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powered solution where efficiency is mandatory for the overall system design (see Beeteson Col. 1, Lines 37-60).

Response to Arguments

6. Applicant's arguments with respect to claims 1-4 have been considered but are moot in view of the new ground(s) of rejection.

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CALVIN C. MA whose telephone number is (571)270-1713. The examiner can normally be reached on 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chanh Nguyen can be reached on 571-272-7772. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Calvin Ma
December 30, 2008

/Chanh Nguyen/
Supervisory Patent Examiner, Art
Unit 2629